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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/734,613 | LOVE ET AL. | |
| | Examiner | Art Unit | |
| | Amara Abdi | 2624 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *14 May 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-43 and 47-55* is/are pending in the application.

4a) Of the above claim(s) *44-46* is/are withdrawn from consideration.

5)☒ Claim(s) *47 and 48* is/are allowed.

6)☒ Claim(s) *1-5,7-10,13-29,32-43 and 49-55* is/are rejected.

7)☒ Claim(s) *6,11,12,30 and 31* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

1. Applicant's response to the last office action, filed May 14th, 2008 has been entered and made of record.

2. In view of the Applicant amendments, the rejection of claims 45-46 under 35 U.S.C§ 101 are expressly withdrawn.

## ***Remarks:***

***3.*** Applicant's argument with respect to claims 1-5, 7-10, 13-29, and 32-49, have been fully considered, but they are not persuasive.

a. Applicant argues that the documents cited in the office Action are prior art to the present invention as none of them related to "encoding a view in a CAD drawing, but instead relate to different subject matter. More specifically, neither Yamamoto not any other cited reference disclose "encoding a two dimension drawing "into a "format different from a CAD drawing" as recited in the amended claims.

However, in response to applicant's argument, the Examiner would like to point out that there is nowhere in the specification, where it is mentioned the "encoding of a view in a 2 dimensional CAD drawing into format different from the CAD drawing". More specifically, there is nowhere in the specification where it mention the word "encoding". For more precision, the coding of a view in a CAD drawing is different from the encoding of a view in a 2 dimensional CAD drawing, so the use of term encoding is rendering the claim broader and does not have any support from the specification. As cited in the "Merriam- Webster", the encoding is defined as: "converting from one system of

communication into another", where the coding is defined as "putting in or into form or symbols of a code", (see: www.m-w.com). *Second*, there is no support in the specification for the limitation that the coding of a view is made in 2 dimensional CAD drawing into format different from a CAD drawing. Therefore, the added limitation of: "encoding of a view in a 2 dimensional CAD drawing into format different from the CAD drawing" is considered a new matter, and it has not been given any weight in the Examination.

b. Applicant argues that Yamamoto does not extract properties from 2D CAD drawing, it instead teaches to extract properties from 3D drawing in order to generate 2D drawing.

However, in response to applicant's argument, the Examiner disagrees, because the extracting of properties from 3D drawing is the same concept as the extracting of the properties from 2D drawing. Therefore, the rejection is proper, and should be sustained.

## ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1, 20, 23, 40, 49, and 54 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to

reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

(1) Claim 1, recites the limitation: "encoding of a view in a 2 dimensional CAD drawing into format different from the CAD drawing". There is no support for this limitation in the Specification, therefore it is considered as a new matter. Furthermore, claim 1 recites the limitation: "wherein the view code is an encoded version of the view in a different format", there is no support for this limitation in the specification, therefore, it is considered as a new matter.

(2) Claim 20, recites the limitation: "encoding a view from a 3-dimensitonal CAD model into a format different from a CAD model". There is no support for this limitation in the Specification, therefore it is considered as a new matter. Furthermore, claim 20 recites the limitation: "wherein the view code is an encoded version of the view in a different format", there is no support for this limitation in the specification, therefore, it is considered as a new matter.

(3) Claim 23, recites the limitation: "a method of encoding a view in a CAD drawing into a format different from a CAD drawing". There is no support for this limitation in the Specification, therefore it is considered as a new matter. Furthermore, claim 23 recites the limitation: "wherein the view code is an encoded version of the view in a different format", there is no support for this limitation in the specification, therefore, it is considered as a new matter.

(4) Claim 40 recites the limitation: ""wherein the view code is an encoded version of the view in a different format", there is no support for this limitation in the specification, therefore, it is considered as a new matter.

(5) Claim 49, recites the limitation: "a method of producing a model code directly from a 3-dimensional CAD model in a format different from a CAD model". There is no support for this limitation in the Specification, therefore it is considered as a new matter.

(6) Claim 54, recites the limitation: "...including instructions for encoding a view in 2-Dimentional CAD drawing into format different from a CAD drawing". There is no support for this limitation in the Specification, therefore it is considered as a new matter.

## ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-3, 7, 17-26, 36-39, 49-52, and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto (US-PGPUB 2001/0043236) in view of Agnes et al. (US 6,918,095) and Beatty et al. (US-PGPUB 2004/0049307).

***(1) Regarding claims 1 and 54:***

The limitation of claim 1: "a method of encoding a view in a 2-dimensional CAD drawing

into a format different from a CAD drawing" has not been given any weight in the Examination, since it is considered as a new matter (see the rejection of claim 1 under 35 U.S.C §112, First paragraph).

The limitation of claim 54: "to encode a view in a CAD drawing, including instruction for encoding a view in a 2-pdimensional CAD drawing into a format different from a CAD drawing" has not been given any weight in the Examination, since it is considered as a new matter (see the rejection of claim 1 under 35 U.S.C §112, First paragraph).

Yamamoto discloses a CAD system and computer program (paragraph [0040], line 5), comprising:

b) identifying a view in 2-dimwnsional CAD drawing (paragraph [0012], line 11-14, and paragraph [0058], line 10-11);

c) identifying a feature of the view, where the feature comprises a graphic entity or a group of graphic entities (paragraph [0012], line 14-18, and paragraph [0058], line 12-13);

d) extracting properties of the feature from the 2D CAD drawing (paragraph [0050], line 3-4), (the extracting of form of features from 3D drawing is read as the same concept as the extracting of properties of the feature from the 2D CAD drawing).

Yamamoto does not explicitly mention that the graphic entities are in form of line or curve, where the properties include vector properties associated with the graphic

entity or group of graphic entities and are derived from coordinates relating to the feature's position within the drawing; the filtering of the two dimensional CAD drawing to temporarily remove extraneous material therefrom; and the generating of code bits representative of the extracted properties, and adding the code bit to a view code for the view, and storing the view code.

*(a) Obviousness in view of Agnes et al.*

Agnes et al., in analogous environment, teaches a dimension generation filter and analysis where filtering the two dimensional CAD drawing to temporarily remove extraneous material therefrom (FIG. 2, column 4, line 10-15, and column 8, line 24-26), (it is clearly shows in the Agnes's patent that the image is two dimensional image on column 5, line 13-15, and column 8, line 24-26).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Agnes et al., where filtering the 2 dimensional CAD drawing, in the system of Yamamoto in order to provide a user with the capability to better control the dimension generation process (column 1, line 49-50).

*(a) Obviousness in view of Beatty et al.*

Beatty et al., in analogous environment, teaches an electronic work instruction object oriented system and method, where the graphic entities are in form of line or curve (paragraph [0050], line 7-8), and the properties include vector properties associated with the graphic entity or group of graphic entities (paragraph [0050], line 5-7) and are derived from coordinates relating to the feature's position within the drawing (paragraph [0050], line 8-13), (the feature's position is read as the position of the curve

in drawing, and it is read as obvious, because every graphic entities such as a line or curve has coordinate in the drawing such as XYZ). And generating a code bits representative of the extracted properties (paragraph [0041], line 1-3), wherein the code bits are representative of the extracted vector properties (paragraph [0050], line 25-32), and adding the code bit to a view code for the view (paragraph [0041], line 1-3), (it is read that the transmission of the hand drawing over the web requires the use of the vector drawing to facilitates the transmission over the internet (see paragraph [0050], line 25-32), and the transmission of the vector drawing over the internet involves the compression of the data, which obviously involves the generating of code bits representative of vector properties, and the adding of the code bit to a view code for the view, which is well known for one having ordinary skill in the art); And storing the view code (paragraph [0014], line 9-10), (the storing of the data record in the central file repository is read as the same concept as the storing of the view code in the memory).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Beatty et al., where the graphic entities are in form of line or curve, in the system of Yamamoto, because the use of CAD program to create vector images enables process engineers to edit the modifiable graphical component of the design data when even it is deemed necessary to do so, and the use of the vector drawing facilitates the transmission of graphic information over the internet (paragraph [0050], line 25-32).

***(2) Regarding claim 2:***

The rejection of claim of claim 1 from steps c) to g) applies to claim 2, for further entities and/or groups of entities in the view.

***(3) Regarding claim 3:***

Yamamoto further discloses that the group of graphic entities includes entities having similar properties (paragraph [0047], line 4-6), (the properties are read as the geometric features), entities of a similar type or entities (paragraph [0046], line 13-15), (the similar type or entities is read as the similar class), which form the group by virtue of their location (paragraph [0065], line 9-10).

**(4) Regarding claim 7:**

Yamamoto further discloses that the step of extracting the properties comprises identifying a type for each property from a predefined plurality of property types (paragraph [0042], line 5-7), each property type having associated items of property data (paragraph [0053], line 4-5), extracting the property data from the CAD drawing (paragraph [0050], line 3-4) and writing the type and associated property data items to a list (paragraph [0051], line 1-3), (the class is read as the list where the property data items is written).

**(5) Regarding claim 17:**

Yamamoto discloses all the subject matter as described in claim 1 above.

Yamamoto does not explicitly mention that the filtering of the drawing includes temporarily removing a frame/ boarder of the drawing.

Agnes et al., in analogous environment, teaches a dimension generation filter and analysis where filtering of the drawing includes temporarily removing a frame/ boarder of the drawing (column 2, line 37-40), (the removing of the frame/ boarder is read as the same concept as deleting of the drawing data).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Agnes et al., where filtering of the drawing, in the system of Yamamoto in order to provide a user with the capability to better control the dimension generation process (column 1, line 49-50).

**(6) Regarding claim 18:**

Yamamoto discloses the identifying of line entities, which make up the frame/boarder (paragraph [0044], line 14-17), (it is read that the feature's profile view comprising the frame/boarder), identifying an inner boundary of the frame/boarder line entities (paragraph [0065], line 5-8), and temporarily deleting all graphic entities outside the inner boundary (paragraph [0041], line 16-18), (by applying the threshold, the number of detailed features to be included in the projection view is limited, as result it's deleting all the graphic entities that are outside the boundary).

Yamamoto does not explicitly mention the removing of frame/ boarder temporarily.

Agnes et al., in analogous environment, teaches a dimension generation filter and analysis where the frame/ boarder is temporarily removed by filtering the unwanted dimension from all views of drawing (column 5, line 18-21).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Agnes et al., where removing the frame/ boarder temporarily, in the system of Yamamoto in order to provide a user with the capability to better control the dimension generation process (column 1, line 49-50).

**(7) Regarding claim 19:**

Yamamoto discloses the removing all the subject matter as described in claim 17 above.

Yamamoto does not explicitly mention that the filter process includes temporarily removing other entities including any one or more of: dimension, machine marks, lines of prescribed type or name or color, drawing layers of prescribed name, text with prescribed color, and blocks.

Agnes et al., in analogous environment, teaches a dimension generation filter and analysis where filtering the drawing to exclude drawing data items from generation process (column 2, line 15-18), (it is read that the drawing data items includes lines of prescribed type, name, and blocks).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Agnes et al., where removing other entities, in the system of Yamamoto in order to provide a user with the capability to better control the dimension generation process (column 1, line 49-50).

***(8) Regarding claim 20:***

The limitation: “a method of encoding a view in a 3-dimensional CAD drawing

into a format different from a CAD drawing" has not been given any weight in the Examination, since it is considered as a new matter (see the rejection of claim 1 under 35 U.S.C §112, First paragraph).

Yamamoto discloses a CAD system, comprising:

a) deriving a 2-dimensional view from the 3-dimensional CAD model (paragraph [0036], line 1-4), (the producing of 2-dimensional view from the 3-dimensional view is read as the same concept as the deriving of 2-dimensional view from the 3-dimensional CAD model);

b) identifying a feature of the view, where the feature comprises a graphic entity or a group of graphic entities (paragraph [0012], line 14-18, and paragraph [0058], line 12-13);

d) extracting properties of the feature from the vector based 3D CAD model (paragraph [0050], line 3-4), (the extracting of form of features from 3D drawing is read as the same concept as the extracting of properties of the feature from the 2D CAD drawing).

Yamamoto does not explicitly mention that the graphic entities are in form of line or curve, where the properties include vector properties associated with the graphic entity or group of graphic entities and are derived from coordinates relating to the feature's position within the drawing; and the generating of code bits representative of the extracted properties, and adding the code bit to a view code for the view, and storing the view code.

Beatty et al., in analogous environment, teaches an electronic work instruction object oriented system and method, where the graphic entities are in form of line or curve (paragraph [0050], line 7-8), and the properties include vector properties associated with the graphic entity or group of graphic entities (paragraph [0050], line 5-7) and are derived from coordinates relating to the feature's position within the drawing (paragraph [0050], line 8-13), (the feature's position is read as the position of the curve in drawing, and it is read as obvious, because every graphic entities such as a line or curve has coordinate in the drawing such as XYZ). And generating a code bits representative of the extracted properties (paragraph [0041], line 1-3), wherein the code bits are representative of the extracted vector properties (paragraph [0050], line 25-32), and adding the code bit to a view code for the view (paragraph [0041], line 1-3), (it is read that the transmission of the hand drawing over the web requires the use of the vector drawing to facilitates the transmission over the internet (see paragraph [0050], line 25-32), and the transmission of the vector drawing over the internet involves the compression of the data, which obviously involves the generating of code bits representative of vector properties, and the adding of the code bit to a view code for the view, which is well known for one having ordinary skill in the art); And storing the view code (paragraph [0014], line 9-10), (the storing of the data record in the central file repository is read as the same concept as the storing of the view code in the memory).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Beatty et al., where the graphic entities are in form of line or curve, in the system of Yamamoto, because the use of CAD program to

create vector images enables process engineers to edit the modifiable graphical component of the design data when even it is deemed necessary to do so, and the use of the vector drawing facilitates the transmission of graphic information over the internet (paragraph [0050], line 25-32).

***(9) Regarding claim 21:***

The rejection of claim of claim 20 from steps b) to f) applies to claim 21, for further entities and/or groups of entities in the view.

***(10) Regarding claim 22:***

The rejection of claim 20 from steps a) to f) applies to claim 22, for further views from the 3-dimensional CAD model so as to store a plurality of codes.

***(11) Regarding claim 23:***

The limitation: "a method of encoding a view in a CAD drawing
into a format different from a CAD drawing" has not been given any weight in the Examination, since it is considered as a new matter (see the rejection of claim 1 under 35 U.S.C §112, First paragraph).

Yamamoto discloses a CAD system, comprising:

a) identifying a feature of the view, where the feature comprises a graphic entity or a group of graphic entities (paragraph [0012], line 14-18, and paragraph [0058], line 12-13);

b) extracting properties of the feature from the vector based CAD drawing (paragraph [0050], line 3-4), (the extracting of form of features from 3D drawing is read

as the same concept as the extracting of properties of the feature from the 2D CAD drawing).

Yamamoto does not explicitly mention that the graphic entities are in form of line or curve, where the properties include vector properties associated with the graphic entity or group of graphic entities and are derived from coordinates relating to the feature's position within the drawing; and the generating of code bits representative of the extracted properties, and adding the code bit to a view code for the view, and storing the view code.

Beatty et al., in analogous environment, teaches an electronic work instruction object oriented system and method, where the graphic entities are in form of line or curve (paragraph [0050], line 7-8), and the properties include vector properties associated with the graphic entity or group of graphic entities (paragraph [0050], line 5-7) and are derived from coordinates relating to the feature's position within the drawing (paragraph [0050], line 8-13), (the feature's position is read as the position of the curve in drawing, and it is read as obvious, because every graphic entities such as a line or curve has coordinate in the drawing such as XYZ). And generating a code bits representative of the extracted properties (paragraph [0041], line 1-3), wherein the code bits are representative of the extracted vector properties (paragraph [0050], line 25-32), and adding the code bit to a view code for the view (paragraph [0041], line 1-3), (it is read that the transmission of the hand drawing over the web requires the use of the vector drawing to facilitates the transmission over the internet (see paragraph [0050], line 25-32), and the transmission of the vector drawing over the internet involves the

compression of the data, which obviously involves the generating of code bits representative of vector properties, and the adding of the code bit to a view code for the view, which is well known for one having ordinary skill in the art); And storing the view code (paragraph [0014], line 9-10), (the storing of the data record in the central file repository is read as the same concept as the storing of the view code in the memory).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Beatty et al., where the graphic entities are in form of line or curve, in the system of Yamamoto, because the use of CAD program to create vector images enables process engineers to edit the modifiable graphical component of the design data when even it is deemed necessary to do so, and the use of the vector drawing facilitates the transmission of graphic information over the internet (paragraph [0050], line 25-32).

***(12) Regarding claim 24:***

The rejection of claim 23 from steps a) to d) applies to claim 21, for further entities and/or groups of entities in the view.

**(13) Regarding claim 25:**

Yamamoto further discloses that the group of graphic entities includes entities having similar properties (paragraph [0047], line 4-6), (the properties are read as the geometric features), entities of a similar type or entities (paragraph [0046], line 13-15), (the similar type or entities is read as the similar class), which form the group by virtue of their location (paragraph [0065], line 9-10).

**(14) Regarding claim 26:**

Yamamoto further discloses that the step of extracting the properties comprises identifying a type for each property from a predefined plurality of property types (paragraph [0042], line 5-7), each property type having associated items of property data (paragraph [0053], line 4-5), extracting the property data from the CAD drawing (paragraph [0050], line 3-4) and writing the type and associated property data items to a list (paragraph [0051], line 1-3), (the class is read as the list where the property data items is written).

**(15) Regarding claim 36:**

Yamamoto discloses all the subject matter as described in claim 23 above.

Yamamoto does not explicitly mention a filter process for temporarily removing extraneous material from the drawing, prior to extracting the vector properties.

Agnes et al., in analogous environment, teaches a dimension generation filter and analysis where filtering the drawing to exclude drawing data items from the generation process (column 2, line 15-18) prior to extracting the vector properties (paragraph [0050], line 3-4), (the extracting of vector properties is read as the same concept as the extracting of properties of the feature from the 2D CAD drawing, and it is obvious that the graphic entity includes a vector properties).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Agnes et al., where filtering the drawing, in the system of Yamamoto in order to provide a user with the capability to better control the dimension generation process (column 1, line 49-50).

**(16) Regarding claim 37:**

Yamamoto discloses all the subject matter as described in claim 36 above.

Yamamoto does not explicitly mention that the filtering of the drawing includes temporarily removing a frame/ boarder of the drawing.

Agnes et al., in analogous environment, teaches a dimension generation filter and analysis where filtering of the drawing includes temporarily removing a frame/ boarder of the drawing (column 2, line 37-40), (the removing of the frame/ boarder is read as the same concept as deleting of the drawing data).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Agnes et al., where filtering of the drawing, in the system of Yamamoto in order to provide a user with the capability to better control the dimension generation process (column 1, line 49-50).

**(17) Regarding claim 38:**

Yamamoto discloses the identifying of line entities, which make up the frame/boarder (paragraph [0044], line 14-17), (it is read that the feature's profile view comprising the frame/boarder), identifying an inner boundary of the frame/boarder line entities (paragraph [0065], line 5-8), and temporarily deleting all graphic entities outside the inner boundary (paragraph [0041], line 16-18), (by applying the threshold, the number of detailed features to be included in the projection view is limited, as result it's deleting all the graphic entities that are outside the boundary).

Yamamoto does not explicitly mention the removing of frame/ boarder temporarily.

Agnes et al., in analogous environment, teaches a dimension generation filter and analysis where the frame/ boarder is temporarily removed by filtering the unwanted dimension from all views of drawing (column 5, line 18-21).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Agnes et al., where removing the frame/ boarder temporarily, in the system of Yamamoto in order to provide a user with the capability to better control the dimension generation process (column 1, line 49-50).

**(18) Regarding claim 39:**

Yamamoto discloses the removing all the subject matter as described in claim 37 above.

Yamamoto does not explicitly mention that the filter process includes temporarily removing other entities including any one or more of: dimension, machine marks, lines of prescribed type or name or color, drawing layers of prescribed name, text with prescribed color, and blocks.

Agnes et al., in analogous environment, teaches a dimension generation filter and analysis where filtering the drawing to exclude drawing data items from generation process (column 2, line 15-18), (it is read that the drawing data items includes lines of prescribed type, name, and blocks).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Agnes et al., where removing other entities, in the system of Yamamoto in order to provide a user with the capability to better control the dimension generation process (column 1, line 49-50).

***(19) Regarding claim 49:***

The limitation: "a method of producing a model code directly from a 3-dimensional CAD model in form different from a CAD model" has not been given any weight in the Examination, since it is considered as a new matter (see the rejection of claim 1 under 35 U.S.C §112, First paragraph).

Yamamoto discloses a CAD system, comprising:

a) identifying a feature of the view, where the feature comprises a graphic entity or a group of graphic entities (paragraph [0012], line 14-18, and paragraph [0058], line 12-13);

b) extracting properties of the feature from the vector based CAD drawing (paragraph [0050], line 3-4), (the extracting of form of features from 3D drawing is read as the same concept as the extracting of properties of the feature from the 2D CAD drawing).

Yamamoto does not explicitly mention that the graphic entities are in form of line or curve, where the properties include vector properties associated with the graphic entity or group of graphic entities and are derived from coordinates relating to the feature's position within the drawing; and the generating of code bits representative of the extracted properties, and adding the code bit to a view code for the view, and storing the view code.

Beatty et al., in analogous environment, teaches an electronic work instruction object oriented system and method, where the graphic entities are in form of line or

curve (paragraph [0050], line 7-8), and the properties include vector properties associated with the graphic entity or group of graphic entities (paragraph [0050], line 5-7) and are derived from coordinates relating to the feature's position within the drawing (paragraph [0050], line 8-13), (the feature's position is read as the position of the curve in drawing, and it is read as obvious, because every graphic entities such as a line or curve has coordinate in the drawing such as XYZ). And generating a code bits representative of the extracted properties (paragraph [0041], line 1-3), wherein the code bits are representative of the extracted vector properties (paragraph [0050], line 25-32), and adding the code bit to a view code for the view (paragraph [0041], line 1-3), (it is read that the transmission of the hand drawing over the web requires the use of the vector drawing to facilitates the transmission over the internet (see paragraph [0050], line 25-32), and the transmission of the vector drawing over the internet involves the compression of the data, which obviously involves the generating of code bits representative of vector properties, and the adding of the code bit to a view code for the view, which is well known for one having ordinary skill in the art); And storing the view code (paragraph [0014], line 9-10), (the storing of the data record in the central file repository is read as the same concept as the storing of the view code in the memory).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Beatty et al., where the graphic entities are in form of line or curve, in the system of Yamamoto, because the use of CAD program to create vector images enables process engineers to edit the modifiable graphical component of the design data when even it is deemed necessary to do so, and the use

of the vector drawing facilitates the transmission of graphic information over the internet (paragraph [0050], line 25-32).

***(20) Regarding claim 50:***

Yamamoto discloses disclose all the subject matter as described in claim 1 above.

Yamamoto et al. do explicitly mention the method, where the line or curve comprises a straight line, arc or circle.

Beatty et al., in analogous environment, teaches an electronic work instruction object oriented system and method, where the line or curve comprises a straight line, arc or circle (paragraph [0050], line 7-8), (it is read that the shape could be a circle).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Beatty et al., where the line or curve comprises a straight line, arc or circle, in the system of, in the system of Yamamoto, because the use of CAD program to create vector images enables process engineers to edit the modifiable graphical component of the design data when even it is deemed necessary to do so, and the use of the vector drawing facilitates the transmission of graphic information over the internet (paragraph [0050], line 25-32).

***(21) Regarding claim 51:***

Yamamoto discloses disclose all the subject matter as described in claim 1 above.

Yamamoto et al. do explicitly mention the method, where the vector properties include coordinate data for specifying the location of a feature.

Beatty et al., in analogous environment, teaches an electronic work instruction object oriented system and method, where the vector properties include coordinate data for specifying the location of a feature (paragraph [0050], line 8-13), (the feature's position is read as the position of the curve in drawing, and it is read as obvious, because every graphic entities such as a line or curve has coordinate in the drawing such as XYZ).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Beatty et al., where the graphic entities are in form of line or curve, in the system of Yamamoto, because the use of CAD program to create vector images enables process engineers to edit the modifiable graphical component of the design data when even it is deemed necessary to do so, and the use of the vector drawing facilitates the transmission of graphic information over the internet (paragraph [0050], line 25-32).

***(22) Regarding claim 52:***

Yamamoto discloses disclose all the subject matter as described in claim 1 above.

Yamamoto et al. do explicitly mention the method, where the vector properties include coordinate data defining the geometry of a feature such as line length, orientation, and radius)

Beatty et al., in analogous environment, teaches an electronic work instruction object oriented system and method, where the vector properties include coordinate data defining the geometry of a feature such as line length, orientation, and radius

(paragraph [0050], line 8-13) (the feature's position is read as the position of the curve in drawing, and it is read as obvious, because every graphic entities such as a line or curve has coordinate in the drawing such as XYZ defining its geometry of feature, and geometry of a feature being line length, orientation, and radius is read as obvious, because every vector in geometry has length, orientation, and radius).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Beatty et al., where the graphic entities are in form of line or curve, in the system of Yamamoto, because the use of CAD program to create vector images enables process engineers to edit the modifiable graphical component of the design data when even it is deemed necessary to do so, and the use of the vector drawing facilitates the transmission of graphic information over the internet (paragraph [0050], line 25-32).

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto, Agnes et al., and Beatty et al., as applied to claim 1 above, and further in view of Tally et al. (US 6,918,092) and Naka et al. (US 5,583,975)

Yamamoto, Agnes et al., and Beatty et al. disclose all the subject matter as described in claim 1 above.

Yamamoto, Agnes et al., and Beatty et al. do not explicitly mention the defining of a boundary enclosing an area, which includes the graphic entities in the drawing and dividing the area to define a plurality of view area, such that each view area includes one or more graphic entities, and no graphic entity is included in more that one area.

*(a) Obviousness in view of Tally et al.*

Tally et al., in analogous environment, teaches a graphical list grouping widget and method of use, where defining a boundary enclosing an area, which included the graphic entities in the drawing (column 3, line 28-42).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Tally et al., where defining a boundary enclosing an area, in the system of Yamamoto in order to provide the segmenting of sets of distinct entities into groups with associated boundaries each having an associated logic (column 2, line 10-13).

*(b) Obviousness in view of Naka et al.*

Naka et al., in analogous environment, teaches an image generation apparatus and method, where dividing the area to define a plurality of view area (column 7, line 50-55), such that each view area includes one or more graphic entities, and no graphic entity is included in more that one area (it is obvious that each view area includes one or more graphic entities, and no graphic entity is included in more that one area).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Naka et al., where dividing the area to define a plurality of view area, in the system of Yamamoto in order to computing intensity across visible surfaces with a lesser computation amount and without deteriorating the image qualities (column 2, line 1-2).

9. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto, Agnes et al., Beatty et al., Tally et al., and Naka et al., as applied to claim 4 above, and further in view of Takahashi et al. (US 6,256,417).

Yamamoto, Agnes et al., Beatty et al., Tally et al., and Naka et al. disclose all the subject matter as described in claim 4 above.

Yamamoto, Agnes et al., Beatty et al., Tally et al. do not explicitly mention that the boundary is a boundary rectangle, and splitting the bounding rectangle to define plurality of view rectangles.

Takahashi et al., in analogous environment, teaches an image coding method, where the boundary is a boundary rectangle (column 5, line 6), where dividing the boundary rectangle to define a plurality of view rectangles (column 4, line 66-67, and column 5, line 1-5).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Takahashi et al., where the boundary is a boundary rectangle, in the system of Yamamoto in order to effectively utilize the significant signal to improve the coding efficiency (column 2, line 57-60).

10. Claims 8-9, and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto, Agnes et al., and Beatty et al., as applied to claims 7 and 23 above, and further in view of Ajima et al. (US 5,390,199).

***(1) Regarding claim 8:***

Yamamoto, Agnes et al., and Beatty et al. disclose all the subject matter as described in claim 7 above.

Yamamoto, Agnes et al., and Beatty et al. do not explicitly mention the setting of type code bits corresponding to the property type and setting data code bits corresponding to each item of property data.

Ajima et al., in analogous environment, teaches an advanced code error detection apparatus and system, where setting the type code bits corresponding to the property type (column 6, line 33), (the first state is read as the same concept as the type code bits) and setting data code bits corresponding to each item of property data (column 6, line 35-40).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Ajima et al., where the setting of type code bits is corresponding to the property type, in the system of Yamamoto in order to reliably

***(2) Regarding claim 9:***

Yamamoto, Agnes et al., and Beatty et al. disclose all the subject matter as described in claim 7 above.

Yamamoto, Agnes et al., and Beatty et al. do not explicitly mention the comparing of each property data item with a predetermined sub-set of data associated.

Ajima et al., in analogous environment, teaches an advanced code error detection apparatus and system, where comparing a bit data output from output terminal with the bit data output of the reception code input (column 6, line 42-45), (the

comparing of a bit data output from output terminal with the bit data output of the reception code input is read as the same concept as the comparing of each property data item with a predetermined sub-set of data associated).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Ajima et al., where comparing a bit data output from output terminal with the bit data output of the reception code input, in the system of Yamamoto in order to reliably detecting a bit error in bit data of a reception code input before the establishment of synchronization regardless of the use of burst frames (column 4, line 61-65).

***(3) Regarding claim 27:***

Yamamoto, Agnes et al., and Beatty et al. disclose all the subject matter as described in claim 23 above.

Yamamoto, Agnes et al., and Beatty et al. do not explicitly mention the setting type code bits corresponding to the property type and setting data code bits corresponding to each item of property data.

Ajima et al., in analogous environment, teaches an advanced code error detection apparatus and system, where setting type code bits corresponding to the property type (column 6, line 33), (the first state is read as the type code bits), and setting data code bits corresponding to each item of property data (column 6, line 35-40)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Ajima et al., where setting type code bits

corresponding to the property type, in the system of Yamamoto in order to reliably detect bit error in bit data including the bit data of a reception code input before the establishment of synchronization regardless of the use of burst frames (column 4, line 61-65).

***(4) Regarding claim 28:***

Yamamoto, Agnes et al., and Beatty et al. disclose all the subject matter as described in claim 27 above.

Yamamoto, Agnes et al., and Beatty et al. do not explicitly mention the comparing of each property data item with a predetermined sub-set of data associated.

Ajima et al. teaches an advanced code error detection apparatus and system, where comparing bit data output from output terminal with the bit data output of the reception code input (column 6, line 42-45), (the comparing of bit data output from output terminal with the bit data output of the reception code input is read as the same concept as the comparing of each property data item with a predetermined sub-set of data associated).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Ajima et al., where comparing bit data output from output terminal with the bit data output of the reception code input, in the system of Yamamoto in order to reliably detect bit error in bit data including the bit data of a reception code input before the establishment of synchronization regardless of the use of burst frames (column 4, line 61-65).

11. Claims 10 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto, Agnes et al., and Beatty et al., and Ajima et al., as applied to claims 9 and 28 above, and further in view of Bloomfield et al. (US-PGPUB 2001/0036322).

Yamamoto, Agnes et al., and Beatty et al., and Ajima et al. disclose all the subject matter as described in claim 9 above.

Yamamoto, Agnes et al., and Beatty et al., and Ajima et al. do not explicitly mention that each bit has an associated attribute.

Bloomfield et al., in analogous environment, teaches an image processing system using an array processor, where each code bit has an associate attribute (paragraph [0053], line 1-7).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Bloomfield et al., where each code bit has an associate attribute, in the system of Yamamoto because such feature has an advantage of scalability, ease of programming, deterministic high speed processing, high throughput, controllability, and extensibility (paragraph [0023], line 9-11).

12. Claims 13-16, and 32-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto, Agnes et al., and Beatty et al., as applied to claim 1 above, and further in view of Inoue et al. (US-PGPUB 2003/0149780).

***(1) Regarding claim 13:***

Yamamoto, Agnes et al., and Beatty et al. disclose all the subject matter as described in claim 1 above.

Yamamoto, Agnes et al., and Beatty et al. do not explicitly mention that the storing of the view code includes encrypting the view code and storing the encrypted view code.

Inoue et al., in analogous environment, teaches a verification of image data, where encrypting the view code and storing the encrypted view code (paragraph [165], line 5-9), (the encrypting is read as encoding “referring to the Merriam Webster dictionary”, and the transferring of the object stream to the memory is read as the same concept as the storing of the encrypted view code).

All the claim limitations are known in references Yamamoto, Agnes et al., Beatty et al., and Inoue et al., the only difference is the combination the encrypting of the view code and storing the encrypted view code with the 2-dimensional CAD drawing.

in addition, the KSR states: "All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yield predictable results to one of ordinary skill in the art at the time of the invention” (*Adapted from Anderson’s Black Rock Inc. v. Pavement Salvage Co.*)

Thus, it would have been obvious to one having ordinary skill in the art to use the method, where encrypting the view code and storing the encrypted view code as though by Inoue with the 2-dimensional CAD drawing as shown by Yamamoto, since the encrypting the view code and storing the encrypted view code could be use in combination with the 2-dimensional drawing to achieve the predictable results of efficiently execute verification processing (paragraph [0014], line 2-3).

***(2) Regarding claim 14:***

Yamamoto, Agnes et al., and Beatty et al. disclose all the subject matter as described in claim 1 above.

Yamamoto, Agnes et al., and Beatty et al. do not explicitly mention the storing of the encrypted view code.

Inoue et al., in analogous environment, teaches a verification of image data, where storing the encrypted view code (paragraph [165], line 5-9), (the storing of the encrypted view code is read as the same concept as the storing of encoded programs).

All the claim limitations are known in references Yamamoto, Agnes et al., Beatty et al., and Inoue et al., the only difference is the combination the storing the encrypted view code with the 2-dimensional CAD drawing.

in addition, the KSR states: "All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yield predictable results to one of ordinary skill in the art at the time of the invention" (*Adapted from Anderson's Black Rock Inc. v. Pavement Salvage Co.*)

Thus, it would have been obvious to one having ordinary skill in the art to use the method, where storing the encrypted view code as though by Inoue with the 2-dimensional CAD drawing as shown by Yamamoto, since the storing the encrypted view code could be use in combination with the 2-dimensional drawing to achieve the

predictable results of efficiently execute verification processing (paragraph [0014], line 2-3).

**(3) Regarding claim 15:**

Yamamoto discloses that the CAD system are encoded in a computer program and stored in a computer readable storage medium (paragraph [0071], line 3-5), (it is read that the CAD system comprises all the views).

Yamamoto does not explicitly mention the storing of encrypted view codes in the drawing.

Inoue et al., in analogous environment, teaches a verification of image data, where storing the encrypted view code (paragraph [165], line 5-9), (the storing of the encrypted view code is read as the same concept as the storing of encoded programs).

All the claim limitations are known in references Yamamoto, Agnes et al., Beatty et al., and Inoue et al., the only difference is the combination the storing the encrypted view code with the 2-dimensional CAD drawing.

in addition, the KSR states: "All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yield predictable results to one of ordinary skill in the art at the time of the invention" (*Adapted from Anderson's Black Rock Inc. v. Pavement Salvage Co.*)

Thus, it would have been obvious to one having ordinary skill in the art to use the method, where storing the encrypted view code as though by Inoue with the 2-dimensional CAD drawing as shown by Yamamoto, since the storing the encrypted view

code could be use in combination with the 2-dimensional drawing to achieve the predictable results of efficiently execute verification processing (paragraph [0014], line 2-3).

**(4) Regarding claim 16:**

Yamamoto further discloses the storing of at least one of the image file of the drawing (paragraph [0039], line 6), (the image file of the drawing is read as the image data), details of a part or component depicted by the drawing, and other information relating to the drawing (paragraph [0071], line 13-16), (it is read that the CAD system comprises the details of a part or component depicted by the drawing, and other information relating to the drawing).

***(5) Regarding claim 32:***

Yamamoto and Beatty et al. disclose all the subject matter as described in claim 23 above.

Yamamoto and Beatty et al. do not explicitly mention that the storing of the view code includes encrypting the view code and storing the encrypted view code.

Inoue et al., in analogous environment, teaches a verification of image data, where encrypting the view code and storing the encrypted view code (paragraph [165], line 5-9), (the encrypting is read as encoding "referring to the Merriam Webster dictionary", and the transferring of the object stream to the memory is read as the same concept as the storing of the encrypted view code).

All the claim limitations are known in references Yamamoto, Agnes et al., Beatty et al., and Inoue et al., the only difference is the combination the encrypting of the view code and storing the encrypted view code with the 2-dimensional CAD drawing.

in addition, the KSR states: "All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yield predictable results to one of ordinary skill in the art at the time of the invention" (*Adapted from Anderson's Black Rock Inc. v. Pavement Salvage Co.*)

Thus, it would have been obvious to one having ordinary skill in the art to use the method, where encrypting the view code and storing the encrypted view code as though by Inoue with the 2-dimensional CAD drawing as shown by Yamamoto, since the encrypting the view code and storing the encrypted view code could be use in combination with the 2-dimensional drawing to achieve the predictable results of efficiently execute verification processing (paragraph [0014], line 2-3).

***(6) Regarding claim 33:***

Yamamoto and Beatty disclose all the subject matter as described in claim 32 above. Furthermore, Yamamoto discloses the catalogue being a portion of the database in which a sub-set of drawing is stored (paragraph [0071], line 13-16), (the catalogue is read as the local mass storage which is a portion of database).

Yamamoto, and Beatty et al. do not explicitly mention the storing of the encrypted view code.

Inoue et al., in analogous environment, teaches a verification of image data, where storing the encrypted view code (paragraph [165], line 5-9), (the storing of the encrypted view code is read as the same concept as the storing of encoded programs).

All the claim limitations are known in references Yamamoto, Agnes et al., Beatty et al., and Inoue et al., the only difference is the combination the storing the encrypted view code with the 2-dimensional CAD drawing.

in addition, the KSR states: "All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yield predictable results to one of ordinary skill in the art at the time of the invention" (*Adapted from Anderson's Black Rock Inc. v. Pavement Salvage Co.*)

Thus, it would have been obvious to one having ordinary skill in the art to use the method, where storing the encrypted view code as though by Inoue with the 2-dimensional CAD drawing as shown by Yamamoto, since the storing the encrypted view code could be use in combination with the 2-dimensional drawing to achieve the predictable results of efficiently execute verification processing (paragraph [0014], line 2-3).

***(7) Regarding claim 34:***

Yamamoto discloses that the CAD system are encoded in a computer program and stored in a computer readable storage medium (paragraph [0071], line 3-5), (it is read that the CAD system comprises all the views).

Yamamoto, Agnes et al., and Beatty et al. do not explicitly mention the storing of the encrypted view code.

Inoue et al., in analogous environment, teaches a verification of image data, where storing the encrypted view code (paragraph [165], line 5-9), (the storing of the encrypted view code is read as the same concept as the storing of encoded programs).

All the claim limitations are known in references Yamamoto, Agnes et al., Beatty et al., and Inoue et al., the only difference is the combination the storing the encrypted view code with the 2-dimensional CAD drawing.

in addition, the KSR states: "All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yield predictable results to one of ordinary skill in the art at the time of the invention" (*Adapted from Anderson's Black Rock Inc. v. Pavement Salvage Co.*)

Thus, it would have been obvious to one having ordinary skill in the art to use the method, where storing the encrypted view code as though by Inoue with the 2-dimensional CAD drawing as shown by Yamamoto, since the storing the encrypted view code could be use in combination with the 2-dimensional drawing to achieve the predictable results of efficiently execute verification processing (paragraph [0014], line 2-3).

***(8) Regarding claim 35:***

Yamamoto further discloses the storing of at least one of the image file of the drawing (paragraph [0039], line 6), (the image file of the drawing is read as the image data), details of a part or component depicted by the drawing, and other information relating to the drawing (paragraph [0071], line 13-16), (it is read that the CAD system comprises the details of a part or component depicted by the drawing, and other information relating to the drawing).

13. Claims 40-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto (US-PGPUB 2001/0043236) in view of Inoue et al. (US-PGPUB 2003/0149780) and Ajima et al. (US 5, 390, 199).

***(1) Regarding claim 40:***

Yamamoto discloses the selecting of a CAD drawing for retrieval form a database of drawing (paragraph [0039], line 9-12), comprising:

a) producing a CAD source drawing comprising a source view (paragraph [0037], line 1-6);

b) identifying a feature of the view, where the feature comprises a graphic entity or a group of graphic entities (paragraph [0012], line 14-18, and paragraph [0058], line 12-13);

c) extracting properties of the feature from the CAD model (paragraph [0050], line 3-4), (the extracting of form of every feature is read as the same concept as the

extracting of properties of the feature from the CAD model), where the properties include vector properties associated with the graphic entity or group of graphic entities (paragraph [0045], line 11-14), (it is obvious that the graphic entity includes a vector properties);

g) selecting the drawing for retrieval from the database (paragraph [0043], line 2-3) on the basis of the similarity index (paragraph [0044], line 3-6), (the similarity index is read as the similar class or appropriate class).

Yamamoto does not explicitly mention the following items:

1) the comparing of the source view code with each of a plurality of stored view codes and calculating a similarity index for each stored view code of the plurality.

2) the generating of code bits representative of the extracted properties, and adding the code bit to a view code for the view

*(a)Obviousness in view of Ajima et al,*

Ajima et al., in analogous environment, teaches an advanced code error detection apparatus and system, where comparing a bit data output from output terminal with the bit data output of the reception code input (column 6, line 42-45), (the comparing of a bit data output from output terminal with the bit data output of the reception code input is read as the same concept as the comparing of the source view code with the plurality of stored view codes).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Ajima et al., where comparing a bit data output from output terminal with the bit data output of the reception code input, in the system of

Yamamoto in order to reliably detecting a bit error in bit data of a reception code input before the establishment of synchronization regardless of the use of burst frames (column 4, line 61-65).

*(a) Obviousness in view of Beatty et al.*

Beatty et al., in analogous environment, teaches an electronic work instruction object oriented system and method, where the graphic entities are in form of line or curve (paragraph [0050], line 7-8), and the properties include vector properties associated with the graphic entity or group of graphic entities (paragraph [0050], line 5-7) and are derived from coordinates relating to the feature's position within the drawing (paragraph [0050], line 8-13), (the feature's position is read as the position of the curve in drawing, and it is read as obvious, because every graphic entities such as a line or curve has coordinate in the drawing such as XYZ). And generating a code bits representative of the extracted properties (paragraph [0041], line 1-3), wherein the code bits are representative of the extracted vector properties (paragraph [0050], line 25-32), and adding the code bit to a view code for the view (paragraph [0041], line 1-3), (it is read that the transmission of the hand drawing over the web requires the use of the vector drawing to facilitates the transmission over the internet (see paragraph [0050], line 25-32), and the transmission of the vector drawing over the internet involves the compression of the data, which obviously involves the generating of code bits representative of vector properties, and the adding of the code bit to a view code for the view, which is well known for one having ordinary skill in the art); And storing the view

code (paragraph [0014], line 9-10), (the storing of the data record in the central file repository is read as the same concept as the storing of the view code in the memory).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Beatty et al., where the graphic entities are in form of line or curve, in the system of Yamamoto, because the use of CAD program to create vector images enables process engineers to edit the modifiable graphical component of the design data when even it is deemed necessary to do so, and the use of the vector drawing facilitates the transmission of graphic information over the internet (paragraph [0050], line 25-32).

***(2) Regarding claim 41:***

Yamamoto further discloses, the identifying of a most similar view of the plurality of views, the most similar view having the highest similarity index, and selecting the drawing, which contains the most similar view (paragraph [0044], line 14-17), (the aligning of each feature's profile to the class in order to select the drawing as the same concept as the identifying of a most similar view of the plurality of views, the most similar view having the highest similarity index).

***(3) Regarding claim 42:***

Yamamoto further discloses that the selecting includes the step of displaying a list of drawing for user selection of the drawing (paragraph [0046], line 1-3), the list being ordered according to the similarity indices of views in the drawings (paragraph [0046], line 9-17).

***(4) Regarding claim 43:***

Yamamoto discloses the catalogue being a portion of the database in which the drawings are stored (paragraph [0071], line 13-16), (the catalogue is read as the local mass storage which is a portion of database).

Yamamoto does not explicitly mention the storing of the view codes of view contained in the drawing.

Inoue et al., in analogous environment, teaches a verification of image data, where storing the view code (paragraph [165], line 5-9), (the storing of the view code is read as the same concept as the storing of encoded programs).

All the claim limitations are known in references Yamamoto, Agnes et al., Beatty et al., and Inoue et al., the only difference is the combination the storing the view code with the 2-dimensional CAD drawing.

in addition, the KSR states: "All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yield predictable results to one of ordinary skill in the art at the time of the invention" (*Adapted from Anderson's Black Rock Inc. v. Pavement Salvage Co.*)

Thus, it would have been obvious to one having ordinary skill in the art to use the method, where storing the view code as though by Inoue with the 2-dimensional CAD drawing as shown by Yamamoto, since the storing the view code could be use in combination with the 2-dimensional drawing to achieve the predictable results of efficiently execute verification processing (paragraph [0014], line 2-3).

14. Claims 53 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto (US-PGPUB 2001/0043236) in view Beatty et al. (US-PGPUB 2004/0049307).

***(1) Regarding claim 53:***

Yamamoto discloses the drawing retrieval system for a CAD system (paragraph [0011], line 2) comprising means for entering (paragraph [0051], line 6-7) and means for displaying a drawing (paragraph [0046], line 1-3), and a memory for storing data including a database of drawings (paragraph [0047], line 1-3; and paragraph [0071], line 8), the drawing retrieval system comprising:

a) identifying a feature of the view (paragraph [0012], line 14-18, and paragraph [0058], line 12-13);

b) extracting properties of the feature from the CAD model (paragraph [0050], line 3-4), (the extracting of form of every feature is read as the same concept as the extracting of properties of the feature from the CAD model

e) comparing (i) a first view in a first drawing entered in the entering means with (ii) a second view in a second drawing in the database, to derive a similarity index indicative of a degree of similarity between the first view and the second view (paragraph [0045], line 4-15), (the searching of the projection view database to identify the group to which the specified graphic element belongs is read as the same concept as the comparing of first view in a first drawing entered in the entering means with (ii) a second view in a second drawing in the database, to derive a similarity index indicative of a degree of similarity between the first view and the second view).

f) presenting, on the basis of the similarity index (paragraph [0044], line 3-6), (the similarity index is read as the similarity class or the appropriate class), a list of drawings from which a user can select for retrieval from the database means for retrieving a selected drawing from the database for display on the display means (paragraph [0043], line 2-3).

Yamamoto does not explicitly mention that the graphic entities are in form of line or curve, where the properties include vector properties associated with the graphic entity or group of graphic entities and are derived from coordinates relating to the feature's position within the drawing; and the generating of code bits representative of the extracted properties, and adding the code bit to a view code for the view.

Beatty et al., in analogous environment, teaches an electronic work instruction object oriented system and method, where the graphic entities are in form of line or curve (paragraph [0050], line 7-8), and the properties include vector properties associated with the graphic entity or group of graphic entities (paragraph [0050], line 5-7) and are derived from coordinates relating to the feature's position within the drawing (paragraph [0050], line 8-13), (the feature's position is read as the position of the curve in drawing, and it is read as obvious, because every graphic entities such as a line or curve has coordinate in the drawing such as XYZ). And generating a code bits representative of the extracted properties (paragraph [0041], line 1-3), wherein the code bits are representative of the extracted vector properties (paragraph [0050], line 25-32), and adding the code bit to a view code for the view (paragraph [0041], line 1-3), (it is read that the transmission of the hand drawing over the web requires the use of the

vector drawing to facilitates the transmission over the internet (see paragraph [0050], line 25-32), and the transmission of the vector drawing over the internet involves the compression of the data, which obviously involves the generating of code bits representative of vector properties, and the adding of the code bit to a view code for the view, which is well known for one having ordinary skill in the art).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Beatty et al., where the graphic entities are in form of line or curve, in the system of Yamamoto, because the use of CAD program to create vector images enables process engineers to edit the modifiable graphical component of the design data when even it is deemed necessary to do so, and the use of the vector drawing facilitates the transmission of graphic information over the internet (paragraph [0050], line 25-32).

***(2) Regarding claim 55:***

Yamamoto discloses a computer readable medium encoded with software comprising computer readable instruction (paragraph [0040], line 5) for controlling a computer to facilitate selection by a user of a CAD drawing for retrieval from a database of CAD drawings (paragraph [0071], line 1-7), each CAD drawing in the database comprising at least one view (paragraph [0035], line 4-12) that has been coded by:

a) identifying a feature of the view (paragraph [0012], line 14-18, and paragraph [0058], line 12-13);

b) extracting properties of the feature from the CAD model (paragraph [0050], line 3-4), (the extracting of form of every feature is read as the same concept as the extracting of properties of the feature from the CAD model).

wherein the computer readable instructions includes instructions (paragraph [0071], line 1-7)for:

i) producing a CAD source drawing comprising a source view (paragraph [0037], line 1-6);

Yamamoto does not explicitly mention that the graphic entities are in form of line or curve, where the properties include vector properties associated with the graphic entity or group of graphic entities and are derived from coordinates relating to the feature's position within the drawing; and the generating of code bits representative of the extracted properties, and adding the code bit to a view code for the view, and coding the source in accordance to steps a) to d).

Beatty et al., in analogous environment, teaches an electronic work instruction object oriented system and method, where the graphic entities are in form of line or curve (paragraph [0050], line 7-8), and the properties include vector properties associated with the graphic entity or group of graphic entities (paragraph [0050], line 5-7) and are derived from coordinates relating to the feature's position within the drawing (paragraph [0050], line 8-13), (the feature's position is read as the position of the curve in drawing, and it is read as obvious, because every graphic entities such as a line or curve has coordinate in the drawing such as XYZ). And generating a code bits representative of the extracted properties (paragraph [0041], line 1-3), wherein the code

bits are representative of the extracted vector properties (paragraph [0050], line 25-32), and adding the code bit to a view code for the view (paragraph [0041], line 1-3), (it is read that the transmission of the hand drawing over the web requires the use of the vector drawing to facilitates the transmission over the internet (see paragraph [0050], line 25-32), and the transmission of the vector drawing over the internet involves the compression of the data, which obviously involves the generating of code bits representative of vector properties, and the adding of the code bit to a view code for the view, which is well known for one having ordinary skill in the art).

"The same rejection applies to the coding of the source in accordance to steps a) to d)".

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the system of Beatty et al., where the graphic entities are in form of line or curve, in the system of Yamamoto, because the use of CAD program to create vector images enables process engineers to edit the modifiable graphical component of the design data when even it is deemed necessary to do so, and the use of the vector drawing facilitates the transmission of graphic information over the internet (paragraph [0050], line 25-32).

## ***Allowable Subject Matter***

19. The following is a statement of reasons for the indication of allowable subject matter:

Claims 47 and 48 are allowable over the prior art of record, because the prior art

of record does not teach or suggest the assigning of data range to the vector property to achieve an even distribution of the population of vector property values in each range.

20. Claims 6, 11-12, and 30-31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Contact Information:***

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amara Abdi whose telephone number is (571)270-1670. The examiner can normally be reached on Monday through Friday 8:00 Am to 4:00 PM E.T..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on (571) 272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Amara Abdi/
Examiner, Art Unit 2624

/Brian Q Le/
Primary Examiner, Art Unit 2624